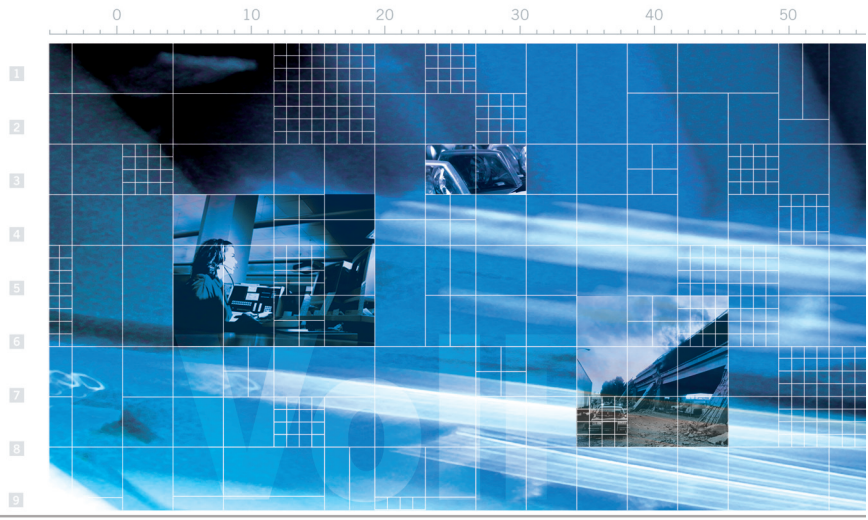
The PSAP Guide to E9-1-1 for VoIP

Frequently Asked Questions



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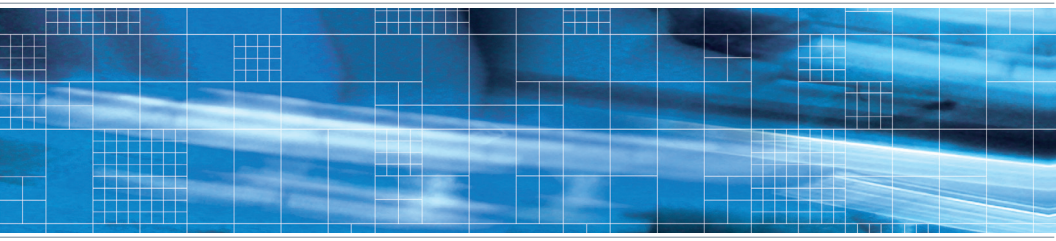


Intrado has prepared this PSAP Guide to E9-1-1 for VoIP – Frequently Asked Questions to help public safety officials understand 9-1-1 issues surrounding VoIP. The statements provided by Intrado are for VSP's contracted for Intrado's V-911 Mobility service. If a VSP is providing their own 9-1-1 service or is using a 3rd party provider other than Intrado, implementation and delivery may vary. Intrado's proven history of integrating new technologies like VoIP into the existing 9-1-1 network makes us uniquely qualified to help meet the demands of today's changing environment quickly, securely and efficiently. We will strive to keep you up to date on changes surrounding VoIP E9-1-1 and the potential impact of these changes on the PSAP community. In the meantime, if you have additional questions please email us at VoIP@intrado.com.

WHAT IS VoIP?

Voice over Internet Protocol (VoIP) is a technology for transmitting ordinary telephone calls over the Internet using packet-linked routes. It is also called IP telephony and Internet Telephony.

WHAT IS A VSP?

VSP Stands for VoIP Service Provider and is a classification given to any provider of VoIP service such as Vonage, Packet 8.

WHAT IS A VPC?

VPC stands for VoIP Position Center and is the routing entity that determines which selective router and which PSAP will receive a VoIP call. A VPC maintains the call information, caller location information and corresponding ESN information and Dynamic ALI record creator.

WHAT IS REGISTERED LOCATION?

Registered Location is defined in the FCC as the most recent location provided to an interconnected VoIP provider by a customer.

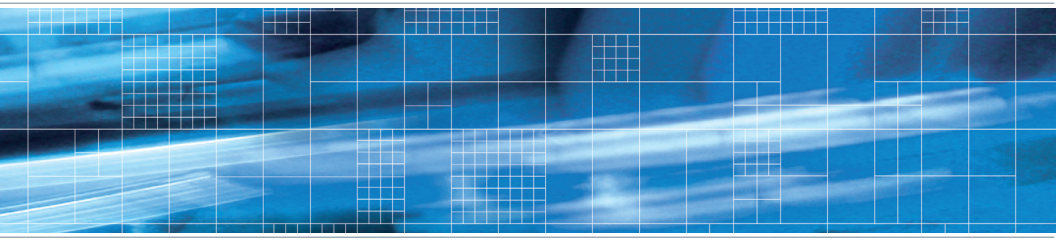
HOW WILL VoIP CUSTOMERS ACCESS MY 9-1-1 SYSTEM?

Per the FCC regulations all VoIP 9-1-1 calls must be delivered through the native 9-1-1 network to the appropriate jurisdiction. VSPs utilizing Intrado's V9-1-1 Mobility Service will be delivered natively into the 9-1-1 network and a Call Back Number and MSAG valid address will be displayed to the dispatcher where V9-1-1 Mobility Service is fully deployed.

WHAT IS THE FCC MANDATE FOR VoIP 9-1-1 SERVICES?

The FCC Order WC No. 04-36 & 05-196 requires the VSP to provide Enhanced 911 service to those entities served by a Selective Router by November 28, 2005. E911 is not an optional enhancement. The VSP may satisfy this requirement by interconnecting through a third party, CLEC, or another solution that allows provider to deliver Selective Router interconnection.

A Wireline E911 Network is defined as "A dedicated wireline network that (1) is interconnected with but largely separate from the public switched telephone network (PSTN) (2) includes a selective router, and (3) is utilized to route emergency calls & related information



to the PSAPs, designated statewide default answering points, appropriate local emergency authorities or other emergency answering points."

The Order provides the IP Connected user one or more methods of updating their Registered Location, including at least one option that requires the use only of the CPE necessary to access the interconnected VoIP service and must allow for the update at will and in a timely manner.

WHAT DID THE FCC ORDER INDICATE FOR TESTING OF VoIP 9-1-1 SERVICE TO THE PSAP?

The FCC order does not speak to testing.

IF MY PSAP HAS A STAND ALONE ALI (SALI) SYSTEM, HOW DOES VoIP IMPACT MY PSAP?

In most cases if the Stand Alone ALI system is already set up for wireless ALI steering, no changes will be required. Some PSAPs may need to make format changes as a result of positioning of the call back number field. In some PSAPs, the call back number is placed in the sublocation field which may require adjustment to accommodate VoIP delivery. In the event the SALI is not capable of steering, Intrado will work with the jurisdiction to determine alternative methods for delivering VoIP 9-1-1 calls.

CAN IP OR VoIP CALL DELIVERY TO THE SELECTIVE ROUTER BE SEGREGATED OR DIVIDED SIMILAR TO WIRELINE AND WIRELESS TRUNK GROUPS?

Segregation of VoIP Calls to the selective router will be based on existing process and assignment of ESNs. Trunk group assignment will be based on what is assigned and provisioned with the LEC.

HOW WILL VoIP CALLS DEFAULT ROUTE?

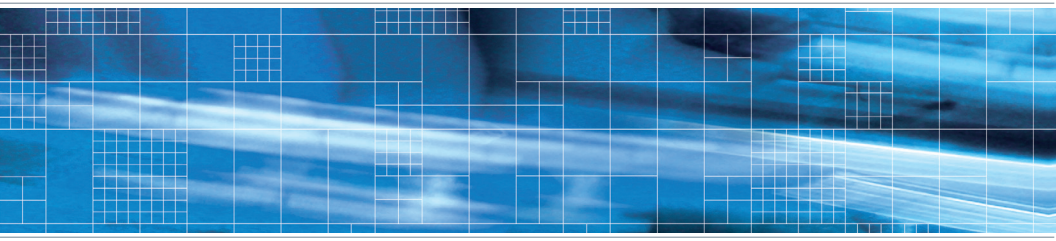
VoIP calls will be arranged to default route to a single PSAP behind the SR. Given the architecture employed to deliver VoIP 911 calls, we believe default routing will be invoked rarely. VoIP pANI delivery is highly reliable, and failure is very unlikely.

HOW WILL VoIP CALLS ALTERNATE ROUTE?

Alternate routing will be performed based upon alternate routing translations previously established by the Selective Routing provider, as they are today.

WILL THE VoIP ALI RECORD DELIVER BOTH LATITUDE/LONGITUDE COORDINATES (X,Y) AND THE MSAG VALID ADDRESS?

X,Y Coordinates are delivered with the VoIP call when a VSP is using Intrado V9-1-1 Mobility Services. They are delivered in the same X,Y field as your agency would see for wireless calls. An MSAG valid address will be dynamically delivered to the dispatcher at the time of the VoIP 9-1-1 call as well.



CAN MY AGENCY UTILIZE THE X,Y COORDINATES DELIVERED IN THE ALI RECORD FOR POPULATION OF INTERNAL SYSTEMS AND PROCESS?

Intrado encourages the use of the MSAG Valid Address for emergency response decisions and routing purposes. The X, Y coordinates delivered are the result of the geocoded Registered Location, and as such use of the MSAG Valid Address recommended.

WITH VoIP 9-1-1 CALLS CAN MY PSAP REBID FOR THE ALI UPDATE?

Yes, but a re-bid may not be necessary since the information will not be different than that displayed during the initial query.

WILL MY PSAP NEED TO REBID?

The Intrado V9-1-1 solution will deliver the most up to date MSAG valid address and call back number ("CBN") associated with the VoIP user.

WHAT IS THE DIFFERENCE BETWEEN STATIC, NOMADIC AND MOBILE VoIP SERVICE?

The Intrado solution enables full 9-1-1 record updates to happen in less than 15 minutes (if the records are error free) thus accommodating the nomadic capabilities of VoIP.

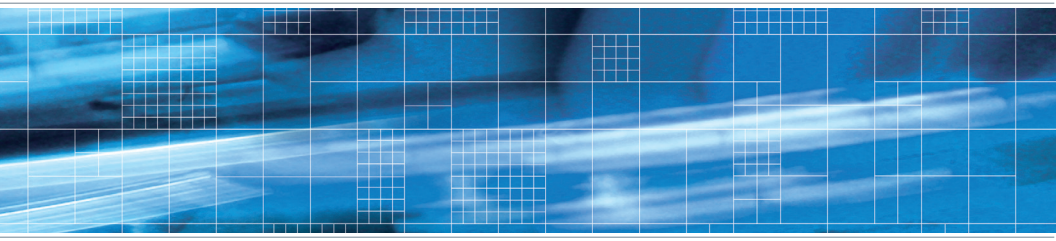
Static VoIP Service: A static VoIP offering that does not enable the user to move their service or utilize an out of region telephone number. It is compatible with the existing 9-1-1 infrastructure, and as such can be treated just as a wireline record under existing processes and procedures.

Nomadic VoIP Service: A nomadic offering challenges the existing 9-1-1 network due to the user's ability to relocate to any broadband connection anywhere and make calls that terminate to the PSTN (including 9-1-1). In addition, these services also may enable the user to have an out of region telephone number associated with their account. (e.g.; having a Colorado telephone number while living in Las Vegas)

Mobile VoIP: This service (while not widely available) will enable a user to move beyond just a wired broadband connection to a handset capable of moving/roaming between disparate networks like from wireless to a WiFi network.

WHAT DATA WILL BE DELIVERED TO THE PSAP ALI SCREEN IN THE FOLLOWING CONDITIONS:

1. A Registered Location geo-codes, but does not MSAG validate
   - When a record Geocodes but does not MSAG validate an Intrado VoIP analyst will work to correct the error using existing wireline processes which may include contacting the jurisdictional authority to validate MSAG changes. Until an MSAG valid address is obtained, Intrado's V9-1-1 service will route the call to the appropriate Selective Router and PSAP without Address information However, the call back number of the VoIP user will be displayed.



2. A Registered Location geo-codes, and also MSAG validates
   • When a record passes both Geocoding and MSAG validation, the MSAG Valid Address and call back number of the VoIP user will be displayed.
3. A Registered Location is not validated at all
   • A Registered Location that fails both Geocoding and MSAG Validation will be returned immediately to the VSP to be resubmitted with valid data. All address submissions happen in real-time with the use of Intrado's provisioning interface.

WOULD THERE EVER BE A "NO RECORD FOUND" CONDITION?
If the Registered Location is not provisioned in Intrado's system, the end user will be unable to terminate to a PSAP, and a "No Record Found" condition would not be possible.

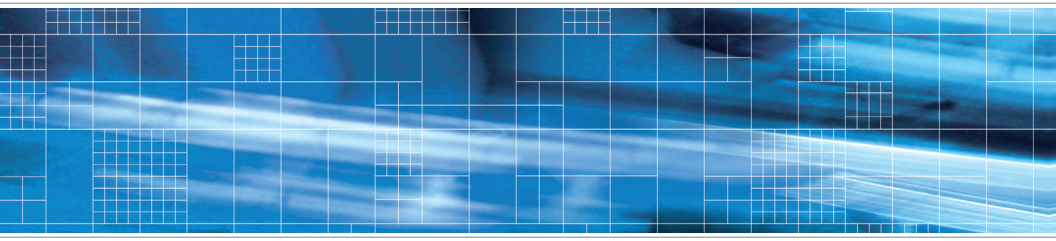
WILL MY PSAP NEED TO CHANGE MY 9-1-1 TRUNKS TO THE SELECTIVE ROUTING?
No. The Intrado V9-1-1 Service will deliver calls to the SR on behalf of our VSPs in a manner consistent with existing wireline SR delivery.

WILL THE VSPS BE CONTACTING THE PSAPS BEFORE THEY TURN UP SERVICE IN MY PSAP AREA? IF SO, WHAT METHOD OF COMMUNICATION WILL THE VSPS PROVIDE?
Intrado is working closely with our VSPs on outreach and notification to PSAPs where they will be delivering 9-1-1 calls. Intrado will also support our VSPs with a notification letter to be sent to the PSAPs in advance of service activation as well as an FAQ document addressing the V9-1-1 Mobility Service.

WHAT IF MY PSAP DOES NOT WANT TO RECEIVE AND HANDLE VoIP 9-1-1 CALLS?
In the event a PSAP does not want to receive native E9-1-1 calls Intrado urges those PSAPs to notify the VSPs operating in their region of the PSAPs intent to deny service. Intrado will support the PSAPs as well as our VSPs in their efforts to deliver an E9-1-1 solution for VoIP 9-1-1 calls.

WHAT ADDITIONAL COSTS WILL THE PSAPS INCUR TO ENABLE VoIP E911 AND TO RECEIVE LOCATION INFORMATION WITH THE VoIP CALL?
Intrado's V9-1-1 Service utilizes existing infrastructure and delivers the call back number and an MSAG valid address to the existing PSAP equipment. From a process, technology and equipment capability standpoint, Intrado's solution is meant to have zero impact on costs at the PSAP. However, if the ALI system utilized is incapable of ALI steering, the PSAP may incur costs to upgrade their ALI platform to enable ALI steering functionality.

WILL MY PSAP NEED TO UPGRADE THE CPE HARDWARE/SOFTWARE OR ALI SYSTEM SOFTWARE?
No changes to PSAP display will be required however depending on the type of equipment and data provisioning in place, PSAPs may need to work with their E911 Service Provider to make minor modifications. Intrado delivers wireline like data (MSAG Valid Address and CBN) consistent with the existing CPE/ALI system processes. However, if the ALI system utilized is



incapable of ALI steering, the PSAP may incur costs to upgrade their ALI platform to enable ALI steering functionality.

WHO WILL BE THE PSAPS MAIN POINT OF CONTACT FOR DEPLOYMENT ASSISTANCE?
Intrado will support our PSAP community and the VSPs as they deploy the new solution in an area.

WILL VoIP E911 CALLS EVER BE DELIVERED TO THE ADMINISTRATIVE NUMBER?
In situations where native E911 delivery is unavailable (due to absence of selective router capability) or when a call is passed to the Intrado Emergency Call Relay Center (due to a 9-1-1 call being made before completion of provisioning processes) the call may ultimately be terminated to the 24x7 emergency line at the PSAP.

This condition may occur in very rare instances, however in these instances Intrado will continue to work closely with our PSAP partners to ensure the most updated information is available.

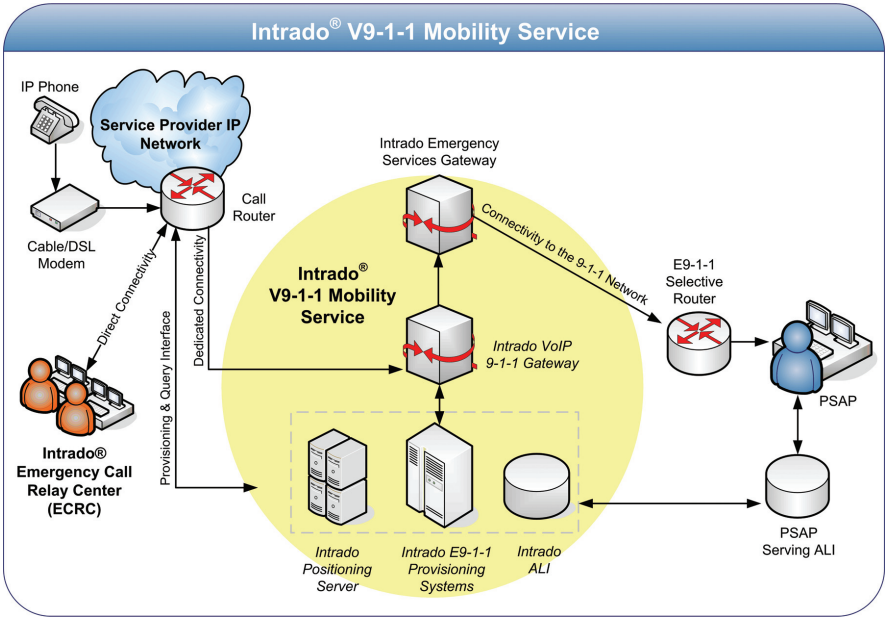
WHAT IS MY PSAP'S RESPONSIBILITY FOR THE FUNDING OF VoIP 9-1-1?
The PSAP is responsible for any costs associated with Selective Router or ALI system software upgrades, the ALI and SR Databases and any upgrades thereto, the MSAG, trunking from the Selective Router to the PSAP and the PSAP CPE.

WHAT ARE THE POTENTIAL DATABASE ERROR TYPES FOR VoIP 9-1-1 RECORDS?
Errors received will be handled like wireline records. The Intrado MSAG validates all VoIP records so standard MSAG error processing will be invoked as necessary. Intrado VoIP analysts will work with the appropriate 911 entities to resolve MSAG errors

WHAT IS THE DATABASE ERROR CORRECTION PROCESS FOR EACH TYPE VoIP 9-1-1 RECORDS?
Intrado VoIP analysts will work directly with the relevant jurisdictional authority to correct MSAG related errors. This will include all standard wireline procedures for requesting range expansions, validation of new streets and communities etc.

HOW DOES MY PSAP HANDLE AN EMERGENCY CALL TRACE FOR A CALL IN PROGRESS?
In the event of a life threatening situation and in the absence of a call back number and address information the 911 entity will work with the Intrado ECRC for call traces. However, if the VSP and call back number is already known to the PSAP, the 7x24 VSP trouble number should be used to obtain the address of the caller.

HOW DOES MY PSAP OBTAIN THE ADMINISTRATIVE AND 7X24 CONTACT INFORMATION OF THE VSP AND VPC?
Intrado will deliver the VSP company ID (NENA ID) with the ALI record at the time of a 9-1-1 call. In the event, ALI s not available due to an MSAG error not yet corrected the VPC Company ID will be on the ESQK shell record with 24x7 contact information provided to Intrado.



HOW ARE VoIP CUSTOMER SUBSCRIBER RECORDS VALIDATED AND PLACED INTO THE 9-1-1 CALL FLOW?

Intrado Geocodes the Registered Location entered by the VoIP user and then MSAG Validates the Registered Location. The records reside in the Intrado Dynamic ALI where they are made available to the regional ALI upon receiving an ALI query (bid) via the ALI Steering process currently employed for wireless.

WHAT IS THE TIMEFRAME FOR THE VoIP CUSTOMER RECORDS TO BE UPLOADED INTO THE 9-1-1 CALL FLOW?

Intrado provisioning systems enable near real-time address updates for 9-1-1. Assuming records delivered to Intrado over our interface are validated (geocoded and MSAG validated) without error, the records are made ready for a 9-1-1 call within 15 minutes.

WHAT IS THE CALL SET UP TIMING FOR VoIP 9-1-1 COMPARED TO TRADITIONAL WIRELINE 9-1-1 SERVICES?

Call Setup time is comparable to that of wireline 9-1-1 calls.

WHAT TYPE OF TESTING WILL OCCUR WITH VoIP 9-1-1 SERVICES?

Intrado will work with our VSPs to ensure notification and testing occurs in advance of service turn-up.

Intrado Inc. 1601 Dry Creek Drive, Longmont, CO 80503 Phone 720.494.5800 Fax 720.494.6600 **www.intrado.com**

ABOUT INTRADO

For more than two decades, telecommunications providers, public safety organizations and government agencies have turned to Intrado for their communications needs. Intrado provides the core of the nation's 9-1-1 network and delivers innovative solutions to communications service providers and public safety organizations, including complex data management, network transactions, wireless data services and notification services. The company's unparalleled industry knowledge and experience reduce the effort, cost and time associated with providing reliable information for 9-1-1, safety and mobility applications. Additional information on Intrado, its products and services, and past press releases can be found at the Company's Web site: www.intrado.com

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